

Remarks

Claims 1-32 are pending in this application. Reconsideration of the application is respectfully requested in view of the following remarks.

The Office has asserted a rejection of claims 1-3, 5, 7-14, 16, 18-25, 27, and 29-32 under 35 USC §102(e) as anticipated by Leiba, U.S. Patent No. 5,883,661 (“Leiba”) in an Office action dated July 5, 2005 (Office action). The Office has also asserted a rejection of claims 4, 6, 15, 17, 26, and 28 under 35 USC §103(a) as obvious over Leiba in view of Willis, U.S. Patent No. 6,321,376 (“Willis”) in the same Office action. Applicants disagree with the rejections given and the Examiner’s characterizations. Applicants address these rejections below.

With this Amendment After Final, the Applicants have amended claims 12 and 18.

The amendment to claims 12 and 18 adds the language “storage” prior to the existing word “medium” which should not require further consideration and/or search.

1. Patentability over Leiba

The Office has asserted a rejection of claims 1-3, 5, 7-14, 16, 18-25, 27, and 29-32 under 35 USC §102(e) as anticipated by Leiba, U.S. Patent No. 5,883,661 (“Leiba”). Applicants respectfully traverse.

Claim 1

Applicants respectfully submit that Leiba fails to anticipate claim 1, because Leiba fails to teach or suggest “applying the software implementation and the software specification to produce a conformance-test enabled implementation comprising portions of the software implementation and the software specification integrated into a same body of code.” Specifically, claim 1 recites,

1. A computer-implemented method of conformance-testing a software implementation with a software specification, the method comprising:

applying the software implementation and the software specification to produce a conformance-test enabled implementation comprising portions of the software implementation and the software specification integrated into a same body of code wherein nondeterministic choices of the software specification result in assigning a corresponding choice of the conformance-test enabled implementation to a variable; and

the conformance-test enabled implementation comprising a test that the variable comprises one of the nondeterministic choices of the software specification.

For example, the Application states,

Once the specification and implementation are compiled to a common IL, portions of code from both may be applied to produce the conformance-test enabled implementation code. Producing and executing a single body of code alleviates difficulties that arise from separately executing the implementation IL and the specification IL and then attempting to compare the results of the separate executions.

With reference to the system embodiment 200 of Figure 2, an AsmL software specification 202 is compiled to an intermediate language form 204, which may be referred to as the specification LI. *The specification IL 204 is applied to the implementation OL 104 to produce a conformance test enabled intermediate language form 206.* (CT enabled IL form). [Application, Page 6, lines 7-161][Emphasis added.]

Further, Figure 2 of the Application illustrates that portions of code from both the implementation and the specification are integrated into a single body of code. Applicants respectfully submit that Leiba fails to anticipate amended claim 1, because Leiba fails to teach or suggest “applying the software implementation and the software specification to produce a conformance-test enabled implementation comprising portions of the software implementation and the software specification integrated into a same body of code.”

Rather, Leiba teaches the method of executing a command suite twice; first by the specification, producing expected responses for each command, and second by the implementation, producing results which are then compared to the specification response to determine if the implementation version behaved correctly.

This can be seen with reference to FIG. 1 of Leiba and the following text. “In steps 600 and 601, the analyzer 215 fetches an expected response, given in the TIF, and a server response from a proxy 216 or a previously-stored response from a variable, and compares the two tokens for equality in step 602.” [Leiba, 7:7-10.] The TIF (test input file) is part of the Test Data 100 which is (as we currently understand) provided, and which is not modified during testing. The test engine accepts input from the server 140 which produces the server [implementation] response. The test processor

then compares the already known “expected response” with the server [implementation] response to determine if the implementation has behaved correctly. The software implementation (code run on server 140) is never combined with the software specification (as embodied in the Test Data 100), rather, the two are handled separately. For this reason, claim 1 is in condition for allowance, which we respectfully request.

Moreover, claim 1 is patentable on the grounds that Leiba neither teaches nor suggests “wherein nondeterministic choices of the software specification result in assigning a corresponding *choice* of the conformance-test enabled implementation to a variable” as is taught in claim 1. The examiner recites the passage “permitting non-deterministic ordering of the responses” [Leiba 2:30] against the recited arrangement. The phrase from Leiba “permitting non-deterministic ordering of the responses” [Leiba 2:30] is further defined in Leiba thusly: “ The data arrangement in steps 601 through 607 allows for non-deterministic ordering of server responses to a given protocol command, and makes the test data usable with various implementations of a protocol, where such ordering may vary.” [Leiba, 7:28-32.] In Leiba, as currently understood, responses whose exact ordering is not known is permitted, and does not break the implementation. However, nothing is said about non-deterministic *choices*, which are defined in the Application on page 17, lines 10-14, and quoted below:

As previously described, non-deterministic specifications define ranges or choices within which various acceptable behaviors may take place. Non-deterministic specifications are desirable because they do not specify the implementation behavior down to the finest detail. Non-deterministic specification define choices for behavior, providing the software implementer with design freedom within those choices. [Application, p. 17, ll. 10-14.]

Leiba teaches away from such a system, as there is no way taught or suggested in Leiba to implement “non-deterministic *choices*.” as recited in claim 1.

For at least these reasons, claim 1 is allowable. Such action is respectfully requested.

Claims 2-6

Claims 2-6 depend from claim 1. Since they depend from claim 1, they should be allowed for at least the reasons stated for claim 1. In view of the foregoing discussion of claim 1, the merits of the separate patentability of dependent claims 2-6 are not belabored at this time. Claims 2-6 should be allowable. Such action is respectfully requested.

Independent Claims 7, 12, 18, 23, 29

Applicants respectfully submit that for reasons similar to those stated above, such as for claim 1, Leiba fails to anticipate the following features:

Claim 7 — “producing a software object organized such that a step of the software specification and a corresponding code section of the software implementations are integrated in the software object”

Claim 12 — “a same body of code with portions from both the software implementation and the software specification”

Claim 18 — “producing a software object organized such that a step of the software specification and a corresponding code section of the software implementation are integrated in the software object”

Claim 23 — “a same body of code with portions from both the software implementation and the software specification”

Claim 29 — “producing a software object organized such that a step of the software specification and a corresponding code section of the software implementation are integrated in the software object”

Since Leiba fails to anticipate these features of independent claims 7, 12, 18, 23, and 29, they should be allowable. Such action is respectfully requested.

Dependent Claims 8-11, 13-17, 19-22, 24-28, and 30-32

Claims 8-11, 13-17, 19-22, 24-28, and 30-32 depend from the above allowable independent claims. Since claims 8-11, 13-17, 19-22, 24-28, and 30-32 depend from the above allowable independent claims, they should be allowed for at least the above reasons. Such action is respectfully requested.

2. Patentability over Leiba in view of Willis

The Office has also asserted a rejection of claims 4, 6, 15, 17, 26, and 28 under 35 USC §103(a) as obvious over Leiba in view of Willis, U.S. Patent No. 6,321,376 (“Willis”). Applicants respectfully traverse. Leiba and Willis, taken separately or in combination, fail to teach or suggest at least one limitation of claims 4, 6, 15, 17, 26, and 28.

Claim 4 and 6 depend from claim 1 and include all of the language of claim 1. As noted in section 1, Leiba fails to teach or suggest the above-cited language of claim 1. Willis also fails to teach

or suggest the above-cited language of claim 1.

Claims 15 and 17 depend from claim 12 and include all of the language of claim 12. As noted in section 1, Leiba fails to teach or suggest the above-cited language of claim 12. Willis also fails to teach or suggest the above-cited language of claim 12.

Claims 26 and 28 depend from claim 23 and include all of the language of claim 23. As noted in section 1, Leiba fails to teach or suggest the above-cited language of claim 23. Willis also fails to teach or suggest the above-cited language of claim 23.

The combination of references made by the Examiner to reject claims 4, 6, 15, 17, 26, and 28 is improper for at least the same reasons that the combination of Leiba and Willis is improper.

Claims 4, 6, 15, 17, 26, and 28 should be allowable.

Request For Interview

If any issues remain in light of these remarks and amendments, the Examiner is formally requested to contact the undersigned attorney to arrange a telephonic interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution. Applicants submit the preceding formal Amendment and the above remarks so that the Examiner may fully evaluate Applicants' position, thereby enabling the interview to be more focused.

This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.

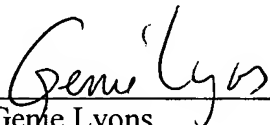
Conclusion

The claims in their present form should now be allowable. Such action is respectfully requested.

Respectfully submitted,

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